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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,925	01/31/2001	Sara H. Basson	YOR920000740US1	5320

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EXAMINER

JACKSON, JAKIEDA R

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/774,925	Applicant(s) BASSON ET AL.	
	Examiner Jakieda R Jackson	Art Unit 2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23-28 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-11, 13-20 and 22 is/are rejected.
- 7) ☒ Claim(s) 5, 12 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. In response to the Office Action mailed August 16, 2004, applicant submitted an amendment filed on November 18, 2004, in which the applicant traversed and requested reconsideration with respect to **claims 1 and 15**.

Response to Arguments

2. Applicants argue that Van Schyndel fails to disclose a display system associated with a user, and also fails to disclose any visual indication on the display system indicating who is currently speaking during an event. However, the examiner disagrees. Van Schyndel discloses that the display of visual indicators is that of the visual and audio showing the individual who is speaking when camera 30 is pointing at that individual and transmission of this data (figure 5, element 105 with column 7, lines 35-46 and column 9, lines 22-36).

Applicants also argue that there is no discussion in Van Schyndel of a determination of whether the current speaker is within a field of "audible perception" of the user. However, Van Schyndel discloses that the directional microphone is moved in the direction of imminent speakers only if they are within the audible perception of the user as determined by the system. When the user is teleconferencing, the user's audible field of perception, in the broadest sense, is defined by what he can hear through the teleconferencing system and his field of view is defined by the position and the field of view of the camera in the conference room (figure 5, element 50 with column 9, lines 4-6 and lines 23-45).

Applicants also argues that the Van Schyndel reference teaches away fro the present invention, which recites a display system associated with a user, which provides the user with one or more visual indications. One of the visual indicators is provided to the user when the current speaker is not within the field of view of the user. This allows the user to change his/her own field of view. Thus, the applicant's argue that the present invention uses a human user as an essential aspect. However, the passage cited states that this eliminates the need for a human camera operator in an auditorium or conference hall environment. The applicant's argue something not claimed, which is the need of a human camera operator. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., human camera operator) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant's argue regarding claims 2 and 16-17 that both the present invention and Budd are both assigned to International Business Machines. Applicant's arguments, see page 5, filed November 18, 2004, with respect to the rejection(s)of claim(s) 2 and 16-17 under 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Lemelson et al.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, applicants argue that claims 6-8, 9-11 and 18-20 does not establish a prima facie case of obviousness.

Regarding claim 6, Potts teaches that determining the location of the speaker based on audio information helps to improve the speaker detection, since the combined use of both audio and video detection modules is used to identify the current speaker and would improve the overall reliability of the system (Potts; column 4, lines 25-29).

Regarding claims 7-8, Van Schyndel teaches capturing directional data associated with display system and positional data associated with the user (step 245, FIG. 2). Since the field of view of the user of the teleconferencing system in Van Schyndel is always the view through the center camera, the position of the current talker is determined as an offset from the central camera position, and the microphones are moved accordingly (FIG. 4a and Col. 7, lines 50-55), in which motivation to combine was not provided since the primary reference was the only reference used.

Regarding claims 9-11 and 18-20, Hein teaches using a colored frame or shared cursor (marker) around the speaker's image, in order to identify him to the viewer where the frame can change color or change background (column 7, lines 8-11). As it is well

known in the art, this indicator would point out the current speaker from a group of people (Hein; column 3, lines 7-9)

Therefore, applicant's arguments filed November 18, 2004 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1, 3, 4 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Schyndel (USPN 5,940,118).

As per **claims 1 and 15**, Van Schyndel discloses:

a method of providing a user (110, FIG. 5) with one or more visual indications, in accordance with a display system associated with the user, of who is currently speaking during an event in which the user is engaged, the event including one or more other individuals, the method comprising the steps of:

- identifying the location of the individual who is currently speaking during the event (20, FIG. 5 with column 3, lines 50-54 and column 7, lines 35-46);

- determining whether the individual identified as the current speaker is within a field of audible perception of the user (50, FIG. 5 and Col. 9, lines 4-6 with lines 23-45). The directional microphone is moved in the direction of imminent speakers only if they are not within the audible perception of the user as determined by the system. When the user is teleconferencing, the user's audible field of perception, in the broadest sense, is defined by what he can hear through the teleconferencing system and his field of view is defined by the position and the field of view of the camera in the conference room);
- displaying a first visual indicator to the user, in accordance with the display system, in association with the individual identified as the current speaker when the individual is within the field of view of the user (105, FIG. 5 and Col. 7, lines 35-46, Col. 9, lines 22-36, i.e., the video and audio showing the individual who is speaking when camera 30 is pointing at that individual and transmission of this data to 105);

Van Schyndel (preferred embodiment) does not disclose (1) the use of determining whether the individual identified as the current speaker is within a field of view of the user and (2) displaying a second visual indicator to the user, in accordance with the display system, when the individual identified as the current speaker is not within the field of view of the user.

However, Van Schyndel (background art) does disclose that it is well-known to direct a camera at a determined sound source to provide coordinated video/audio and eliminate the need for human operator (See Col. 2, lines 27-34).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Van Schyndel's method in order to determine

whether the current speaker is within the field of view of the user as well as the field of audible perception and then direct the camera toward the speaker for display to the user in Van Schyndel (i.e. displaying a second visual indicator, via the monitor 105 that would show redirecting of the camera) as suggested by Van Schyndel as being well-known, the motivation being to provide coordinated video/audio and eliminate the need for a human operator.

As per **claim 3**, Van Schyndel discloses:

- capturing one or more video images of the one or more individuals participating in the event (Col. 7, lines 35-36);
- analyzing the one or more captured video images to determine which individual has one or more facial features indicative of speech (Col.7, lines 39-41);
- designating the individual with the one or more facial features indicative of speech as the current speaker ('dcurrent talker", Col. 7, lines 42-43);
- and determining the location of the individual designated as the current speaker (Col. 7, lines 45-50).

As per **claim 4**, Van Schyndel teaches capturing one or more video images of the field of the user (step 245, FIG. 2). Since the field of view of the user of the teleconferencing system in Van Schyndel is always the view through the center camera, the position of

the current talker is determined as an offset from the central camera position, and the microphones are moved accordingly. (FIG. 4a and Col. 7, lines 50-55)

5. **Claims 2 and 16-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Schyndel as applied to claim 1 above, and further in view of Lemelson et al. (USPN 6,351,273), hereinafter referenced as Lemelson.

As per **claims 2 and 16-17**, Van Schyndel discloses:

a stationary display system (105, FIG. 5), but does not disclose the use of display system worn by the user.

Lemelson teaches head-mounted display system (FIG. 1, elements 32, 18 and 22).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Van Schyndel as taught by Lemelson, in order to provide a hands free environment for the user (column 8, lines 49-65)

6. **Claims 6-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Schyndel as applied to claim 1 above, and further in view of Potts et al. (USPN 6,593,956), hereinafter referenced as Potts.

As per **claim 6**, Van Schyndel discloses:

- capturing audio data of the one or more individuals participating in the event (inherent during the use of microphones, 60, FIG. 5);
- analyzing the audio data to determine which individual is uttering sound indicative of speech (steering microphone towards the direction of incoming sound, Col. 5, lines 5-8 and step 335, FIG. 3); and
- designating the individual uttering sound that is indicative of speech as the current speaker (determining whether the "imminent talker" is currently speaking, Col. 9, lines 10-19).

However, Van Schyndel does not disclose the use of determining the location of the individual designated as the current speaker using audio information.

Potts teaches determining the location of the speaker based on audio information (114, FIG. 4 and Col. 17, lines 35-55)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Van Schyndel as taught by Potts, in order to improve the speaker detection, since the combined use of both audio and video detection modules to identify the current speaker would improve the overall reliability of the system (Col. 4, lines 25-29).

As per **claims 7-8**, Van Schyndel teaches capturing directional data associated with display system and positional data associated with the user (step 245, FIG. 2).

Since the field of view of the user of the teleconferencing system in Van Schyndel is always the view through the center camera, the position of the current talker is determined as an offset from the central camera position, and the microphones are moved accordingly (FIG. 4a and Col. 7, lines 50-55).

7. **Claims 9-11 and 18-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Schyndel as applied to claim 1 above, and further in view of Hein et al. (USPN 6,466,250), hereinafter referenced as Hein.

As per **claims 9-11 and 18-20**, Van Schyndel discloses:

a method for providing a user with one or more visual indications of who is currently speaking, but does not disclose that a "first visual indicator comprises a marker displayed in proximity to a representation of the individual identified as the current speaker on the display system."

Hein teaches using a colored frame or a shared cursor (marker) around the speaker's image in order to identify him to the viewer where the frame can change color or change background (Col. 7, lines 8-11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Van Schyndel et al. as taught by Hein, in order to identify the current speaker located in the field of view of the user, because, as it is well-known in the art, the indicator would point out the current speaker from a group of people (Hein; Col. 3, lines 7-9)

8. **Claims 13-14 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Schyndel as applied to claim 1 above, and further in view of Butnaru et al. (USPN 6,240,392), hereinafter referenced as Butnaru.

As per **claims 13-14 and 22**, Van Schyndel discloses:

a method for providing a user with one or more visual indications of who is currently speaking, but does not disclose obtaining textual transcription of audio content through either human stenography or speech recognition, and displaying textual transcription on the display system.

Butnaru discloses the system that is capable of recognizing the speech using speech recognizer (55, FIG. 3) and displaying the text content to the user via a display system (Col. 5, lines 49-57).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Van Schyndel as taught by Butnaru, to enable

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the deaf people using the system to participate in the videoconferencing or other forms of telecommunications (Col. 1, line 63 - Col. 2, line 8).

Allowable Subject Matter

9. **Claims 5, 12 and 21**, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Independent **claim 23** is allowed.

The following is a statement of reasons for the indication of allowable subject matter:

prior art does not teach or suggest displaying the second indicator to a user, directing him to turn his head in the direction of the speaker (claims 12, 21) and displaying the first visual indicator in such a way that the images of the current speakers and field of view of the user are combined (claim 5). Claim 23 combines all of these individual limitations, and hence is also allowable.

Dependent **claims 24-28** are allowed as dependent on independent claim 23 and further limiting its scope.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


- Dunn et al. (USPN 5,916,302) discloses a multimedia conferencing using parallel networks.
- Marshall (USPN 5,473,726) discloses audio and amplitude modulated phot data collection for speech recognition.
- Addeo et al. (USPN 5,335,011) discloses a sound localization system for teleconferencing using self-steering microphone arrays.
- Greene, JR. et al. (USPN 6,377,925) discloses electronic translator assisting communications.
- Sawaga et al. (USPN 5,734,923) discloses an apparatus for interactively editing and outputting sign language information using graphical user interface.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jakieda R Jackson whose telephone number is 571.272.7619. The examiner can normally be reached on Monday through Friday from 7:30 a.m. to 5:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on 571.272.7593. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JRJ
April 29, 2005



DAVID L. OMETZ
PRIMARY EXAMINER